

CLAIMS

What is claimed is:

1. An antenna apparatus capable of being installed at a mobile body, the antenna apparatus comprising:
 - a plurality of receiving antennas;
 - an antenna switching means for switching each of the plurality of receiving antennas between a connected state and a disconnected state respectively; and
 - a control means for controlling switching by the antenna switching means based on the direction in which, and the speed at which, the mobile body moves relative to the direction of propagation of at least one propagating wave of at least one received signal.
2. An antenna apparatus according to claim 1 wherein:
 - the plurality of receiving antennas is such that the receiving antennas are arranged so as to be respectively parallel and more or less evenly spaced apart.
3. An antenna apparatus according to claim 1 wherein:
 - the antenna switching means supplies electrical power to the receiving antenna or antennas each of which is switched to a connected state by the control means.
4. An antenna apparatus according to claim 1 wherein:
 - the antenna switching means simultaneously switches one or more of the receiving antennas to a connected state respectively in accordance with controlling by the control means.
5. An antenna apparatus according to claim 1 wherein:
 - the difference between the direction in which the mobile body moves and the direction of propagation of at least one of the propagating wave or waves is detected

based on transmitter position information for at least one of the propagating wave or waves and current position information for the mobile body.

6. An antenna apparatus according to claim 1 wherein:

at least one antenna switching technique employed by the control means is altered in correspondence to whether the difference between the direction in which the mobile body moves and the direction of propagation of at least one of the propagating wave or waves is within at least one prescribed range.

7. An antenna apparatus according to claim 1 wherein:

at least one antenna switching rate at the control means is controlled in correspondence to the direction of the mobile body in the direction of propagation of at least one of the propagating wave or waves.

8. An antenna apparatus according to claim 7 wherein:

at least one antenna switching rate at the control means is controlled so as to be at least one switching rate such as will cause the connected receiving antenna or antennas to be substantially stationary relative to at least one source of transmission of at least one of the propagating wave or waves.

9. An antenna apparatus according to claim 1 wherein:

the plurality of receiving antennas and the antenna switching means are formed in integrated circuit fashion.

10. An antenna apparatus according to claim 1 wherein:

the plurality of receiving antennas and the control means are formed in integrated circuit fashion.

11. An antenna apparatus according to claim 1 wherein:

the antenna switching means and the control means are formed in integrated circuit fashion.

12. An antenna apparatus according to claim 1 wherein:

the plurality of receiving antennas, the antenna switching means, and the control means are formed in integrated circuit fashion.

13. An antenna apparatus according to any one of claims 9 through 12 wherein:

at least one continuous-grain silicon process is employed as at least one means for carrying out the forming in integrated circuit fashion.

14. An antenna apparatus according to claim 1 wherein:

the antenna apparatus is capable of being used to receive one or more signals employing orthogonal frequency division multiplexing.

15. An antenna apparatus capable of being installed at a mobile body, the antenna apparatus comprising:

a plurality of receiving antennas;

an antenna switching device for switching each of the plurality of receiving antennas between a connected state and a disconnected state respectively; and

a control device for controlling switching by the antenna switching device based on the direction in which, and the speed at which, the mobile body moves relative to the direction of propagation of at least one propagating wave of at least one received signal.

16. Electronic equipment provided with one or more antenna apparatuses according to any one of claims 1 through 12.

17. Electronic equipment provided with one or more antenna apparatuses according to claim 13.

18. Electronic equipment provided with one or more antenna apparatuses according to claim 14.

19. Electronic equipment provided with one or more antenna apparatuses according to claim 15.